

**AMENDMENTS TO THE SPECIFICATION:**

Please add the following *new* paragraph on page 1, between lines 3 and 4:

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This U.S. National stage application claims priority under 35 U.S.C. §119(a) to Japanese Patent Application Nos. 2004-104762, filed in Japan on March 31, 2004, and 2004-104765, filed in Japan on March 31, 2004, the entire contents of which are hereby incorporated herein by reference.

Please replace the paragraph beginning at page 1, line 9 with the following rewritten version:

Conventionally, an air conditioner that enables the regulation of the humidity of air using an absorbing agent has been known as a desiccant humidity controller and a desiccant outdoor air conditioning unit. For example, the air conditioning system described in ~~Patent Document 1~~ Japanese Patent Publication No. 10-9633 is disposed with two desiccants (absorbing agents) and performs an absorbing operation and a regeneration operation with each desiccant in batches. The air conditioning system also performs dehumidifying air conditioning in a room by repeatedly performing regeneration of the first desiccant and dehumidification of process air by the second desiccant, and dehumidification of process air by the first desiccant and regeneration of the second desiccant, for example.

Please replace the paragraph beginning at page 1, line 18 with the following rewritten version:

The humidity controller described in ~~Patent Document 2~~ Japanese Patent Publication No. 2004-60954 also performs a dehumidifying operation or a humidifying operation by alternately switching between a first operation, where an absorbing operation is performed by a first absorbing element (a unit including an absorbing agent) and a regenerating operation is performed by a second absorbing element, and a second operation, where an absorbing

operation is performed by the second absorbing element and a regenerating operation is performed by the first absorbing element, and supplying first air of the absorbing side or second air of the regenerating side to a room.

Please replace the paragraph beginning at page 1, line 29 with the following rewritten version:

(1) As a control method that uniformly regulates the temperature of regeneration air, a method of controlling the operation of a heat pump that serves as a heat source for regenerating the desiccant on the basis of the humidity and temperature of an air-conditioned space is described in ~~Patent Document 3~~ Japanese Patent Publication No. 9-318128.

Please replace the paragraph beginning at page 1, line 33 with the following rewritten version:

(2) As a control method resulting from deciding the temperature of regeneration air from a set value and a measured value of indoor air humidity or supply air humidity, a method of performing capability control using means which controls the moisture absorption rate of the desiccant in a process air path and means which accelerates a rise in the temperature of the regeneration air in a regeneration air path is described in ~~Patent Document 4~~ Japanese Patent Publication No. 10-54586.

Please remove the paragraph at page 2, line 15 as follows:

~~Patent Document 1~~  
~~JP A 10-9633~~  
~~Patent Document 2~~  
~~JP A 2004-60954~~  
~~Patent Document 3~~  
~~JP A 9-318128~~  
~~Patent Document 4~~

~~JP A 10 54586~~

Please replace the heading at page 2, line 23, with the following rewritten version:

SUMMARY OF THE INVENTION ~~DISCLOSURE OF THE INVENTION~~

Please replace the paragraph beginning at page 3, line 6 with the following rewritten version:

Control of the capability of the dehumidifying and humidifying operations of a conventional desiccant-type outdoor air conditioning unit such as in ~~Patent Document 3~~ and ~~Patent Document 4~~ Japanese Patent Publication Nos. 9-318128 and 10-54586 – for example, capability control whose control target is air temperature – is possible in a flow-type dehumidifying/humidifying system, but is not suited to a batch-type dehumidifying/humidifying system for the reasons that temporal delays of air temperature changes with respect to changes in the operating state such as during batch switching are large, and the temperature distribution (also including changes over time) of each part in the flow path is large.

Please replace the paragraph beginning at page 3, line 17 with the following rewritten version:

An air conditioner pertaining to a first aspect of the present invention processes a latent heat load and a sensible heat load by using a vapor compression refrigeration cycle with a compressor and has a heat exchanger, an absorbing agent, and a controller. The absorbing agent performs an absorbing operation for absorbing moisture in passing air whose heat has been absorbed by the heat exchanger functioning as an evaporator and a regenerating operation for desorbing moisture from passing air heated by the heat exchanger functioning as a condenser. The controller performs control such that the absorbing operation and the regenerating operation by the absorbing agent are switched at a predetermined switching time

interval. The controller also performs control of the capacity of the compressor and control for changing the switching time interval between the absorbing operation and the regenerating operation such that a predetermined load out of a total heat load, which is the sum of the latent heat load and the sensible heat load, the latent heat load, and the sensible heat load is preferentially processed.

Please replace the paragraph beginning at page 4, line 15 with the following rewritten version:

For example, when the predetermined load that is to be preferentially processed is one that has been selected by a user, as in the air conditioner pertaining to a second aspect of the present invention, the selected load is preferentially processed, and an air-conditioner environment that is more suited to the liking of the user can be obtained.

Please replace the paragraph beginning at page 4, line 19 with the following rewritten version:

Further, when the predetermined load that is to be preferentially processed is decided on the basis of the difference between the latent heat processing capability and the size of the latent heat processing, the difference between the sensible heat processing capability and the size of the sensible heat processing, and the difference between the total heat processing capability and the size of the total heat processing, as in the air conditioner pertaining to a third aspect of the present invention, the load whose difference is the greatest is preferentially processed as the predetermined load, and balance of the processing of the total heat load, the latent heat load, and the sensible heat load can be achieved.

Please replace the paragraph beginning at page 4, line 27 with the following rewritten version:

An air conditioner pertaining to the second aspect of the present invention comprises the air conditioner of the first aspect of the present invention and further comprises an input unit that allows a user to select the predetermined load.

Please replace the paragraph beginning at page 4, line 30 with the following rewritten version:

An air conditioner pertaining to the third aspect of the present invention comprises the air conditioner of the first aspect of the present invention, wherein the controller decides the predetermined load to be preferentially processed on the basis of a first difference, a second difference, and a third difference. The first difference is a difference between the current capability to process the total heat load and the size of the total heat load. The second difference is a difference between the current capability to process the latent heat load and the size of the latent heat load. The third difference is a difference between the current capability to process the sensible heat load and the size of the sensible heat load.

Please replace the paragraph beginning at page 5, line 4 with the following rewritten version:

An air conditioner pertaining to a fourth aspect of the present invention comprises the air conditioner of any of the first to ~~the third inventions~~ aspects of the present invention, wherein the controller prioritizes changing the throughput of the latent heat load by controlling the capacity of the compressor over changing the throughput of the latent heat load by control for changing the switching time interval when the predetermined load is the latent heat load.

Please replace the paragraph beginning at page 5, line 17 with the following rewritten version:

An air conditioner pertaining to a fifth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the third aspects of the present invention, wherein the controller prioritizes changing the throughput of the latent heat load by control for changing the switching time interval over changing the throughput of the latent heat load by controlling the capacity of the compressor when the predetermined load is the latent heat load.

Please replace the paragraph beginning at page 6, line 1 with the following rewritten version:

An air conditioner pertaining to a sixth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the third aspects of the present invention, wherein the controller prioritizes changing the throughput of the sensible heat load by controlling the capacity of the compressor over changing the throughput of the sensible heat load by control for changing the switching time interval when the predetermined load is the sensible heat load.

Please replace the paragraph beginning at page 6, line 14 with the following rewritten version:

An air conditioner pertaining to a seventh aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the third aspects of the present invention, wherein the controller prioritizes changing the throughput of the sensible heat load by control for changing the switching time interval over changing the throughput of the sensible heat load by controlling the capacity of the compressor when the predetermined load is the sensible heat load.

Please replace the paragraph beginning at page 6, line 32 with the following rewritten version:

An air conditioner pertaining to an eighth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the third aspects of the present invention, wherein the controller first performs control of the capacity of the compressor when the predetermined load is the total heat load.

Please replace the paragraph beginning at page 7, line 4 with the following rewritten version:

An air conditioner pertaining to a ninth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the third aspects of the present invention, wherein the controller first fixes the ratio of the throughput of the latent heat load to the throughput of the sensible heat load by controlling the switching time interval and thereafter performs control of the capacity of the compressor when the predetermined load is the total heat load.

Please replace the paragraph beginning at page 7, line 23 with the following rewritten version:

An air conditioner pertaining to a tenth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the ninth aspects of the present invention, wherein the air conditioner includes, as the heat exchanger, a first absorptive heat exchanger and a second absorptive heat exchanger on whose surfaces the absorbing agent is disposed. Additionally, the controller switches between a first state and a second state. In the first state, the air conditioner supplies, to the room, air that has been dehumidified or humidified by the absorbing operation or the regenerating operation by the absorbing agent of the first absorptive heat exchanger. In the second state, the air conditioner supplies, to the room, air that has been dehumidified or humidified by the absorbing operation or the regenerating operation by the absorbing agent of the second absorptive heat exchanger.

Please replace the paragraph beginning at page 8, line 9 with the following rewritten version:

An air conditioner pertaining to an eleventh aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the tenth aspects of the present invention, wherein the air conditioner includes the heat exchanger as a utilization heat exchanger. This air conditioner further comprises a heat source heat exchanger separate from the utilization heat exchanger.

Please replace the paragraph beginning at page 8, line 22 with the following rewritten version:

An air conditioner pertaining to a twelfth aspect of the present invention comprises the air conditioner of any of the first ~~invention~~ to the eleventh aspects of the present invention, wherein the controller performs the control of the capacity of the compressor and the control for changing the switching time interval on the basis of at least any one of the temperature of the evaporator, the pressure of the evaporator, the temperature of the condenser, and the pressure of the condenser.

Please replace the paragraph beginning at page 9, line 11 with the following rewritten version:

A method of controlling an air conditioner pertaining to a thirteenth aspect of the present invention is a method of controlling an air conditioner that processes a latent heat load and a sensible heat load in a room by using a vapor compression refrigeration cycle with a compressor and a heat exchanger and using an absorbing agent that performs an absorbing operation and a regenerating operation. The absorbing operation by the absorbing agent refers to an operation for absorbing moisture in passing air whose heat has been absorbed by the heat exchanger functioning as an evaporator. The regenerating operation refers to an operation for desorbing moisture from passing air heated by the heat exchanger functioning as a condenser. This method of controlling an air conditioner comprises performing control



such that the absorbing operation and the regenerating operation by the absorbing agent are switched at a predetermined switching time interval, and performing control of the capacity of the compressor and control for changing the switching time interval such that a predetermined load out of a total heat load, which is the sum of the latent heat load and the sensible heat load, the latent heat load, and the sensible heat load is preferentially processed.

Please replace the paragraph beginning at page 9, line 25 with the following rewritten version:

An air conditioner of a fourteenth aspect of the present invention is an air conditioner that processes a latent heat load and a sensible heat load in a room by using a vapor compression refrigeration cycle with a compressor. The air conditioner comprises a heat exchanger, an absorbing agent, and a controller. The absorbing agent performs an absorbing operation for absorbing moisture in passing air whose heat has been absorbed by the heat exchanger functioning as an evaporator and a regenerating operation for desorbing moisture from passing air heated by the heat exchanger functioning as a condenser. The controller performs control such that the absorbing operation and the regenerating operation by the absorbing agent are switched at a predetermined switching time interval. The controller performs control of the capacity of the compressor and/or control for changing the switching time interval on the basis of at least any one of the temperature of the evaporator, the pressure of the evaporator, the temperature of the condenser, and the pressure of the condenser.

Please replace the paragraph beginning at page 10, line 12 with the following rewritten version:

An air conditioner of a fifteenth aspect of the present invention comprises the air conditioner of the fourteenth aspect of the present invention, wherein the heat exchanger is an absorptive heat exchanger that carries the absorbing agent on its surface. Here, the heat exchanger carries the absorbing agent on its surface, so the temperature of the absorbing agent becomes extremely strongly linked to the refrigerant temperature. Consequently,

performing control of the capacity of the compressor and/or control for changing the switching time interval on the basis of at least any one of the temperature of the evaporator, the pressure of the evaporator, the temperature of the condenser, and the pressure of the condenser becomes extremely effective. Thus, more appropriate latent heat capability control during dehumidification/humidification and control of the sensible/latent heat throughput ratio during dehumidification/humidification become possible.

Please replace the paragraph beginning at page 10, line 23 with the following rewritten version:

An air conditioner of a sixteenth aspect of the present invention comprises the air conditioner of the fourteenth or the fifteenth aspect of the present invention, wherein the air conditioner includes the heat exchanger as a utilization heat exchanger and further comprises a heat source heat exchanger. Here, because the air conditioner further comprises a heat source heat exchanger, this is preferable in terms of processing the sensible heat load.

Please replace the paragraph beginning at page 10, line 28 with the following rewritten version:

An air conditioner of a seventeenth aspect of the present invention comprises the air conditioner of any of the fourteenth to the sixteenth ~~inventions~~ aspects of the present invention, wherein the controller performs the control of the capacity of the compressor and/or the control for changing the switching time interval also on the basis of the humidity of the air in the room. Here, the controller can more appropriately perform control of the capability of the air conditioner.

Please replace the paragraph beginning at page 10, line 33 with the following rewritten version:

An air conditioner of an eighteenth aspect of the present invention comprises the air conditioner of any of the fourteenth to the seventeenth ~~inventions~~ aspects of the present invention, wherein the controller performs the control of the capacity of the compressor and/or the control for changing the switching time interval also on the basis of the humidity of the air flowing into the room from the heat exchanger. Here, the controller can more appropriately perform control of the capability of the air conditioner.

Please replace the paragraph beginning at page 11, line 4 with the following rewritten version:

An air conditioner of a nineteenth aspect of the present invention comprises the air conditioner of any of the fourteenth to the eighteenth ~~inventions~~ aspects of the present invention, wherein the controller performs the control of the capacity of the compressor and/or the control for changing the switching time interval also on the basis of the temperature of the air flowing into the room from the heat exchanger. Here, the controller can more appropriately perform control of the capability of the air conditioner.

Please replace the paragraph beginning at page 11, line 9 with the following rewritten version:

A method of controlling an air conditioner of a twentieth aspect of the present invention uses a vapor compression refrigeration cycle with a compressor and a heat exchanger. The air conditioner uses an absorbing agent that can perform an absorbing operation for absorbing moisture in passing air whose heat has been absorbed by the heat exchanger functioning as an evaporator and a regenerating operation for desorbing moisture from passing air heated by the heat exchanger functioning as a condenser. The air conditioner processes a latent heat load and a sensible heat load in a room. The method comprises performing control to switch the absorbing operation and the regenerating operation by the absorbing agent at a predetermined switching time interval, and performing control of the capacity of the compressor and/or control for changing the switching time

interval on the basis of any one of the temperature of the evaporator, the pressure of the evaporator, the temperature of the condenser, and the pressure of the condenser.

Please remove the paragraph at page 12, line 26, as follows:

**~~DESCRIPTION OF THE REFERENCE NUMERALS~~**

- ~~1 — Refrigerant Circuit~~
- ~~2 — Controller~~
- ~~3 — First Absorptive Heat Exchanger~~
- ~~5 — Second Absorptive Heat Exchanger~~
- ~~7 — Inverter Compressor~~
- ~~9 — Four Way Switch Valve~~
- ~~10 — Air Conditioner~~
- ~~12, 13 — Temperature Sensors~~
- ~~14 — Supply Air Humidity Sensor~~
- ~~15 — Indoor Air Humidity Sensor~~
- ~~101 — Compressor~~
- ~~105 — Regenerative Heat Exchanger~~
- ~~110 — Air Conditioner~~
- ~~181, 182 — Humidity Control Elements~~
- ~~210 — Air Conditioner~~
- ~~211 — Outdoor Heat Exchanger~~
- ~~213 — First Absorptive Heat Exchanger~~
- ~~214 — Second Absorptive Heat Exchanger~~
- ~~221 — Compressor~~
- ~~222 — Outdoor Heat Exchanger~~
- ~~224 — Absorptive Heat Exchanger~~

Please replace the heading at page 13, line 14, with the following rewritten version:

Serial No.: New – PCT/ JP2005/005511 Nat'l Phase  
Filed: Herewith

~~BEST MODES FOR IMPLEMENTING~~ DETAILED DESCRIPTION OF THE  
INVENTION

Please add the following new heading at page 44, between line 1 and 2:

WHAT IS CLAIMED IS: